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	n re Application of
A	pplication Number Filed
	07/891,177 5-29-92
. A	rt Unit Examiner
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	Paper No
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(12) United States Patent

Chait et al.

(10) Patent No.:

US 6,271,037 B1

(45) Date of Patent:

Aug. 7, 2001

(54)	METHOD AND PRODUCT FOR THE	
` '	SEQUENCE DETERMINATION OF	
	PEPTIDES USING A MASS SPECTROMETER	

(75) Inventors: Brian T. Chait, New York, NY (US); Ronald Beavis, Winnipeg (CA); Rong Wang, New York, NY (US); Stephen B. H. Kent, San Francisco, CA (US)

(73)Assignces: The Rockefeller University, NY (US); The Scripps Research Institute, La

(*) Notice:

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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08/341,555

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May 27, 1993

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PCT Pub. Date: Dec. 9, 1993

Related U.S. Application Data

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` '	May 29, 1992, now abandoned.

(51)	Int. Cl. 7	G01N 33/00
(52)	U.S. Cl	436/89; 436/173; 436/174;
		436/178; 250/281; 250/282
(58)	Field of Search	

436/178; 250/281, 282

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(57)**ABSTRACT**

Method is described for sequencing polypeptides by forming peptide ladders comprising a series of polypeptides in which adjacent members of the series vary by one amino acid residue and determining the identity and position of each amino acid in the polypeptide by mass spectroscopy.

45 Claims, 16 Drawing Sheets

1-2-3-4-5-6-7-8-9n-(O)	- 1)
	INTACT STARTING
	PEPTIDE CHAIN
(X)-1-2-3-4-5-6-7-8-9n-(OH)
(X)-2-3-4-5-6-7-8-9n-(OH	,
(X)-3-4-5-6-7-8-5n-(OH	
(X)-4-5-6-7-8-9	•
(X)-5-6-7-8-9 o (OU	